

WHAT IS CLAIMED IS:

1. An apparatus for managing multiple virtual network domains which include a multiplicity of virtual circuits, the system comprising:

an information processing system that includes processor resources, input/output

5 connections, memory and operating system software;

multiple virtual network devices instantiated in shared memory;

multiple respective virtual network device interfaces instantiated in the shared memory  
wherein the respective virtual network device interfaces are associated with respective virtual  
network devices;

10 multiple respective virtual circuit interfaces instantiated in the shared memory; and

multiple respective bindings instantiated in the shared memory that respectively associate  
respective virtual network device interfaces and respective virtual circuit interfaces.

2. A computer readable medium comprising:

multiple virtual network devices instantiated in the medium;

multiple respective virtual network device interfaces instantiated in the medium wherein  
the respective virtual network device interfaces are associated with respective virtual network  
devices;

multiple respective virtual circuit interfaces instantiated in the medium; and

multiple respective bindings instantiated in the medium that respectively associate  
respective virtual network device interfaces and respective virtual circuit interfaces.

3. A network device for managing at least one virtual network domain which includes a  
multiplicity of virtual circuits, the device comprising:

25 processor resources, input/output connections, memory and operating system software;

multiple respective network device rule sets instantiated in the memory;

multiple respective network device interfaces instantiated in the memory wherein the  
respective network device interfaces are associated with respective network rule sets;

multiple respective virtual circuit interfaces instantiated in the memory; and

30 at least one respective bind data structure that can respectively provide a bind between a  
respective virtual circuit interface and either of at least two of the respective network device  
interfaces.

4. The computer readable medium of claim 1 further including:
  - a code mechanism to change the bind provided by the respective bind data structure.
5. A computer readable medium comprising:
  - multiple respective network device rule sets instantiated in the medium;
  - multiple respective network device interfaces instantiated in the medium wherein the respective network device interfaces are associated with respective network rule sets;
  - multiple respective virtual circuit interfaces instantiated in the medium; and
  - at least one respective binding data structure that can respectively bind a respective virtual circuit interface to either of at least two of the respective network device interfaces.